LOUDWATER COMBINED SCHOOL
Computing Policy

Intent

At Loudwater Combined School, we strive to deliver a high-quality computing curriculum which allows our pupils to recognise the significance of digital technology in their everyday lives. We explicitly teach pupils the skills and knowledge they need to become creative, digitally literate, computational thinkers. This policy sets out a framework within which teaching and non-teaching staff can work and gives guidance on planning, teaching and assessments.

The use of digital technology, especially computers and computer systems is an integral part of the National Curriculum and knowing how they work is a key life skill. In an increasingly digital word there now exists a wealth of software, tools and technologies that can be used to communicate, collaborate, express ideas and create digital content. At Loudwater Combined School, we recognise that pupils are entitled to a broad and balanced computing education with a structured, progressive, cyclical approach to the learning of how computer systems work, programming, creating media and managing data and information. This provides our pupils with the skills necessary to become digitally literate and participate fully in the modern world.

Aims

The overall aim for computing is for pupils to become computer scientists, be digitally literate and understand how to use technology safely.

The national curriculum for computing aims to ensure that all pupils:
- Can understand and apply the fundamental principles and concepts of computer science, including abstraction, logic, algorithms and data representation
- Can analyse problems in computational terms, and have repeated practical experience of writing computer programs in order to solve such problems
- Can evaluate and apply information technology, including new or unfamiliar technologies, analytically to solve problems
- Are responsible, competent, confident and creative users of information and communication technology.

Computing offers opportunities for pupils to:
- Develop their ability to apply their digital literacy capability to support their use of language and communication skills;
- Develop their digital literacy capability and understand the importance of information and how to select and prepare it;
- Develop their computational thinking – the ability to solve problems in a creative, logical and collaborative way is developed through repeated programming opportunities and opportunities to build understanding and apply the concepts of computer science;
- Become responsible, competent, confident and creative users of information and communication technology;
- Develop skills involved in computer science, digital literacy and information technology;
- Grow an awareness of how technology is used in the world around them and of the benefits that it provides;
- Develop an understanding of how to use technology safely and the risks associated.

Curriculum

The children undertake a broad and balanced programme that considers children's abilities, needs as well as their emotional and intellectual development. Through computing, the children will learn a range of skills and knowledge to become digitally literate and understand how to use technology safely. We follow the NCCE's Teach Computing scheme for work using their cyclical pedagogy to ensure our pupils know more, remember more and can do more with their computing knowledge and skills.

Equal Opportunities

All pupils regardless of race or gender shall have the opportunity to develop skills using computers and other related technology. The school will promote equal opportunities for computer usage and fairness of distribution of ICT resources. The school is aware that not all pupils have the same access to computers at home and this is considered by staff in the planning and delivery of the curriculum.

Implementation

Computing Curriculum Planning

At Loudwater Combined School, computing is taught around a set of key concepts and second order concepts. A range of key concepts are explored through each computing unit. These concepts include:

1. Computing systems and networks: (systems, networks and how they are used, the internet, hardware and software)

2. Programming: (interpreting, creating and evaluating algorithms, programming to accomplish specific goals, detecting and correcting errors)

3. Data and information: (collecting, analysing, evaluating, presenting data and information)

4. Creating media: (design and development, communicating and collaborating online, evaluating online content, respectful and responsible communication, presenting, creating content)

As part of the work on each key concept, children also explore and learn about:
- The effective use of tools
- The impact of technology
- Safety and security

The curriculum is implemented through the use of NCCE's Teach Computing scheme of work. A subject progression document is integral to the teaching and learning of computing across the whole school, and ensures that children are given the opportunity to build upon prior knowledge. Long term plans, unit overviews and lesson plans provide an appropriate balance and distribution of work throughout the year. By following the progression document alongside the Teach Computing scheme of work, it ensures a sequence of lessons where knowledge and skills are practised, acquired and progressively built upon.

Resources

The school has a range of resources to support the delivery of the Computing curriculum, the Early Years Framework and learning across all areas of the National curriculum. Each class (Year 1- Year 6), have access to laptops which the pupils can access and there are shared iPads across the school. Over this academic year, we will be enhancing our curriculum resources further through the purchasing of Crumbles and Micro:Bits.

Online Safety

Due to the increasing importance and ever-changing nature of online safety, a separate online safety policy has been created, detailing filtering and monitoring procedures along with other information about how we support staff, pupils and parents to stay safe online. Using the Teach Computing scheme of work, our school provides a progressive computing curriculum, which also teaches children about saying safe online and this is also supported through our PSHE curriculum. Online safety is a topic which is taught progressively in each year group through Teach Computing. Opportunities for learning about online safety are part of PSHE lessons and reinforced whenever technology is used and at regular assemblies. Clear rules for online safety are set out in the form of an online agreement which parents and pupils sign at the beginning of each school year. Online safety rules are also displayed in each classroom for pupils to refer to if needed.

Impact

Assessment and Recording

At Loudwater Combined School, assessment is an integral part of the teaching process. The assessment of children's work is on-going to ensure that understanding is achieved and that progress is being made. Feedback is given to the children as soon as possible and guided by the schools' Marking and Feedback Policy.

Monitoring

The impact of the computing curriculum is monitored regularly by the computing lead through pupil discussions, samples of work, discussions with teachers and lesson observations. This is then used to develop subject action plans. The computing lead regularly audits provision and staff training and plans training based on the needs of the staff.

Roles and Responsibilities

The Head teacher will:

- Actively support and encourage staff, praising good practice and supporting staff development, in-service training (particularly for the Computing Lead) and acquiring resources

The Computing Lead will:

- Advise and support staff in planning, teaching and learning of computing;
- Monitor teachers' planning as part of ongoing subject monitoring and evaluation of practice;
- Use feedback from monitoring to develop an action plan for computing with realistic and developmental targets;
- Audit, identify, purchase and organise all computing resources, ensuring they are readily available and well maintained;
- Document and review the agreed ways of working through a written policy document and knowledge and skills progression
- Compile a portfolio of children's computing work to evidence progression and examples of good practice for staff to refer to;
- Keep up to date on new developments in the use of computing in the curriculum and inform staff

The Class Teacher will:

- Be responsible for the planning and teaching of computing as set out in this policy;
- Use the computing curriculum to inform teaching and learning as well as assess children's understanding;

- Follow the subject's long term plan and units of work.
- Embed the computing knowledge and skills progression document within planning and quality first teaching;
- Create and regularly refer to a key vocabulary display within the ICT suite linked to each theme.

Copyright and Licensing

All software used will be in strict accordance with the licence agreement. Turn It On support the school with technical issues as well as ensuring that software on the computers is up to date and in accordance to licences.

Personal software MUST not be loaded onto school computers.

Policy Updated December 2023